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(Lekha Gopalakrishnan)

Docket No.: 064422-5007US
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Kenneth J. Balkus JR. et al.

Confirmation No. 7030

Application No.: 10/601,102

Art Unit: 1774

Filed: June 20, 2003

Examiner: Jill M. Gray

For: ELECTROSPUN MESOPOROUS
MOLECULAR SIEVE FIBERS

DECLARATION OF KENNETH J. BALKUS, JR.

1. My name is Kenneth J. Balkus, Jr. and I am a co-inventor of the subject matter described and claimed in the above-referenced patent application, U.S. Application No. 10/601,102 (hereinafter "102 patent application").

2. I have reviewed and understand that claims 1, 2, 4-7, 9, 31, 32 and 34 are pending in the '102 patent application.


3. I have read and understand the Office Action mailed by the U.S. Patent and Trademark Office on December 1, 2005, in which the Examiner has rejected the above pending claims as anticipated under 35 USC § 102 by US 4,127,706 (hereinafter "Martin '706"), US 4,043,331 (hereinafter "Martin '331"), US 2004/0037813 (hereinafter "Simpson '813"), US 2003/0215624 (hereinafter "Layman '624"), US 6,800,155 (hereinafter "Senecal '155") and US 2003/0017208 (hereinafter "Ignatious '208").

4. This declaration is being submitted to show that the term "mesoporous molecular sieve" has a very specific meaning to one of ordinary skill in the art.

5. As set forth in my prior patents US 6,630,170 and US 6,790,672 directed to applications of molecular sieves, one of ordinary skill in the art would recognize a “mesoporous molecular sieve” to be an ordered periodic metal oxide-based structure. This means all the pores are the same size and the pore walls all have the same thickness. The pores are in the mesopore range (2-50 nm) as defined by the International Union of Pure and Applied Chemistry (IUPAC) and are arranged in a uniform fashion. For example, MCM-41 has uniform pores that are one dimensional and run in parallel. The pore diameters and arrangement depends in part on the template which is typically a micelle forming molecule such as a surfactant. Careful consideration of the synthesis conditions is required to form these ordered structures. This accounts for the fact that these materials comprise a relatively new class of molecular sieves which were only discovered in 1992 by Mobil.

6. On the basis of the meaning of the term “mesoporous molecular sieve” as such a term would be known to one of ordinary skill in the art, I believe that none of the cited references teach, disclose or suggest a fiber produced by electrospinning that contains a mesoporous molecular sieve.

Date 3-1-06



Kenneth J. Balkus, Jr.